

Presentation of Staff Draft
March 18, 2013

COUNTYWIDE TRANSIT CORRIDORS FUNCTIONAL MASTER PLAN

Public Outreach

- ❑ Fall 2011: Two community meetings/open houses
- ❑ Fall 2012: Three community meetings/open houses
- ❑ January 2013: Mid-County CAB
- ❑ February 2013: Coalition for Smarter Growth
- ❑ March-May 2013: BRAC Implementation Committee, Action Committee for Transit, the Montgomery County Civic Federation, Rockville Planning Board, and Rockville Mayor and Council
- ❑ Webpage links to all staff memos, presentations, and resources, as well as an invitation to comment

Schedule

Public
Hearing Draft

- March 18, 2013 – Planning Board approves advertisement of Public Hearing Draft, which begins 30-day review period

Public
Hearing

- May 2, 2013 – Planning Board holds public hearing

Worksessions

- May thru June 2013 – Planning Board holds worksessions on the Functional Plan

Schedule

Planning
Board Draft

- July 25, 2013 – Planning Board delivers Planning Board Draft to County Council and County Executive; 60-day review period begins

Final Master
Plan approval

- Fall-Winter 2013 – County Council approves the Master Plan

Final Master
Plan adoption

- Fall-Winter 2013 – Maryland-National Capital Park and Planning Commission adopts the approved Master Plan

Countywide Transit Corridors Functional Master Plan

Presentation outline

1. Overview of recommended transit corridor network
2. Designation of Bicycle-Pedestrian Priority Areas (BPPAs)
3. MARC Brunswick Line third track
4. BRT as part of the solution to transportation challenges
5. Individual recommended transit corridors



Transit Corridor Network Overview

Recommended Transit Corridor Network

Network

- 10 corridors
- 79 miles
- a mix of treatments
- 2-phase master plan

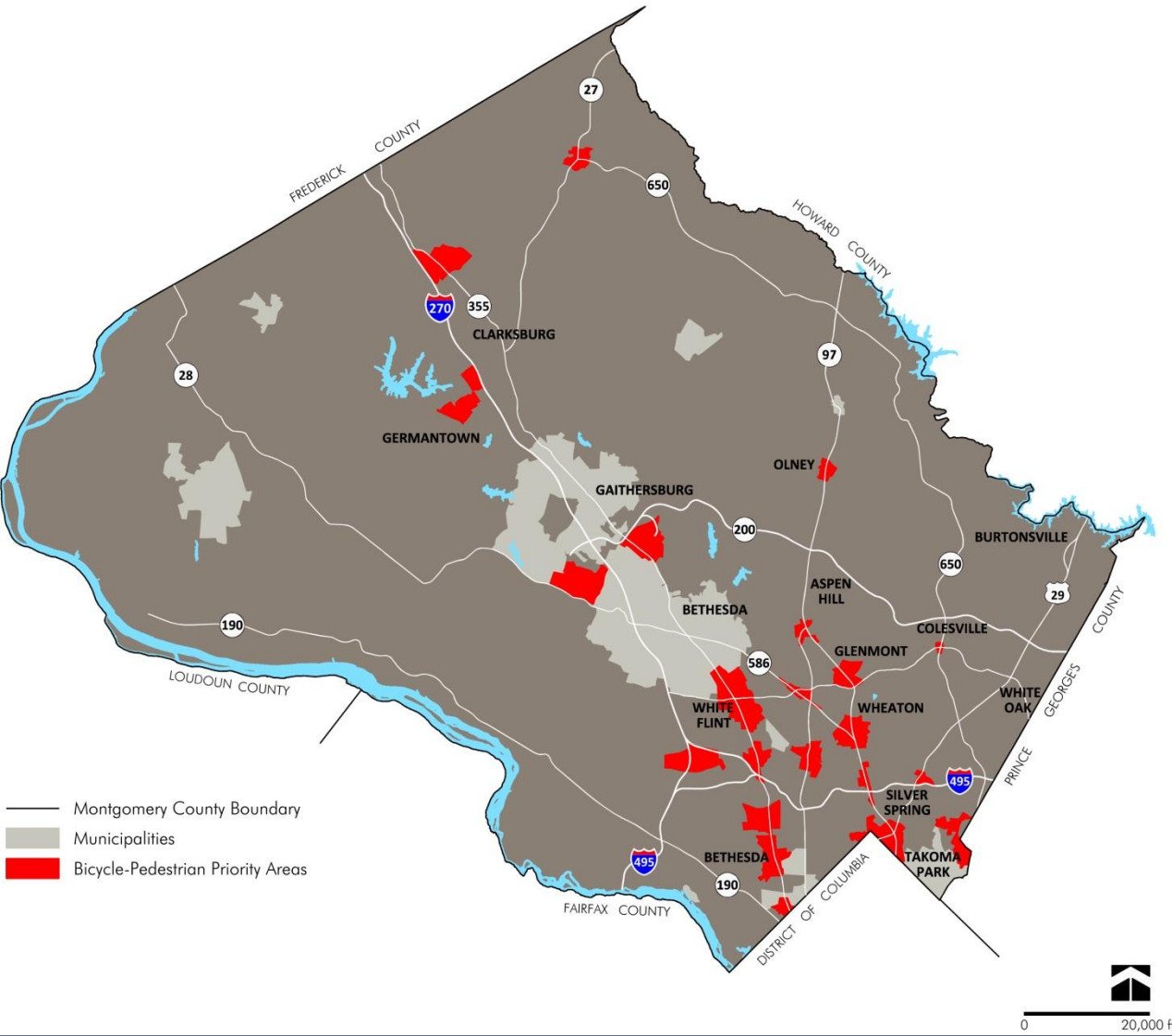
Corridors

1. Georgia Avenue North
 2. Georgia Avenue South
 3. MD355 North
 4. MD355 South
 5. New Hampshire Ave
 6. North Bethesda Twy
 7. Randolph Road
 8. University Boulevard
 9. US29
 10. Veirs Mill Road
- CCT. Corridor Cities Twy



Bicycle-Pedestrian Priority Areas

Bicycle-Pedestrian Priority Areas



Designation around station areas would promote better ped/ bike accommodation in:

- design
- construction
- operations

MARC Brunswick Line Expansion

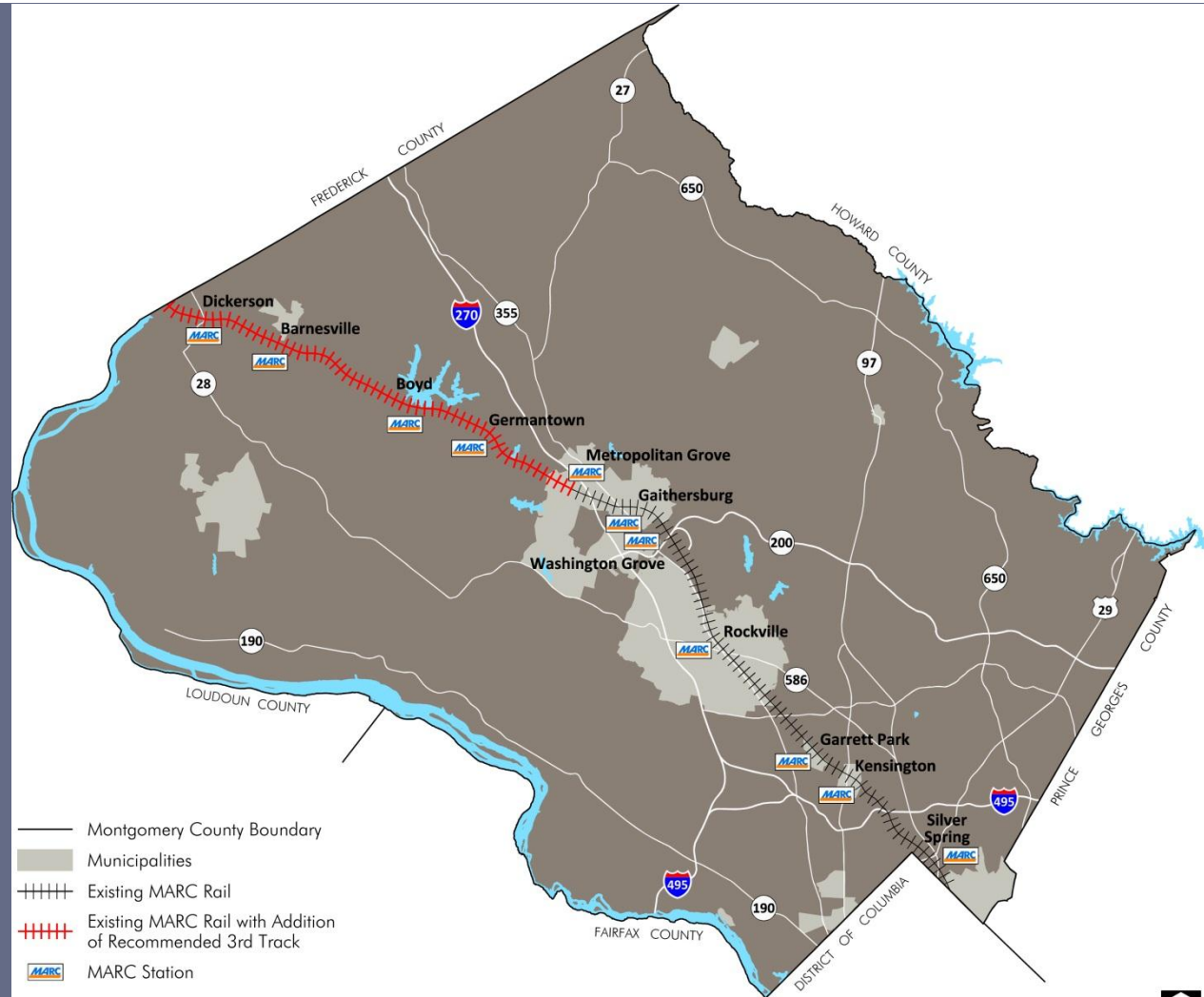
MARC Brunswick Line Expansion

Addition of a third track would reduce conflicts with freight to increase:

- capacity
- flexibility
- reliability

and to enable:

- more frequent service
- all-day service
- weekend service



BRT in the Transportation Network

Montgomery County Demographic and Travel Forecast Summary based on the 2012 CLRP

	2013	2040	Difference	Percent Difference
Population	998k	1.2M	206k	21%
Employment	529k	737k	208k	39%
Vehicle Miles Traveled	22.0m	26.8m	4.8m	22%
Lane Miles*	2,592	2,721	129	5%
Lane Miles of Congestion	376	639	263	70%

Note: Modeled lane miles include freeways, arterials, and many collectors, but few local roads

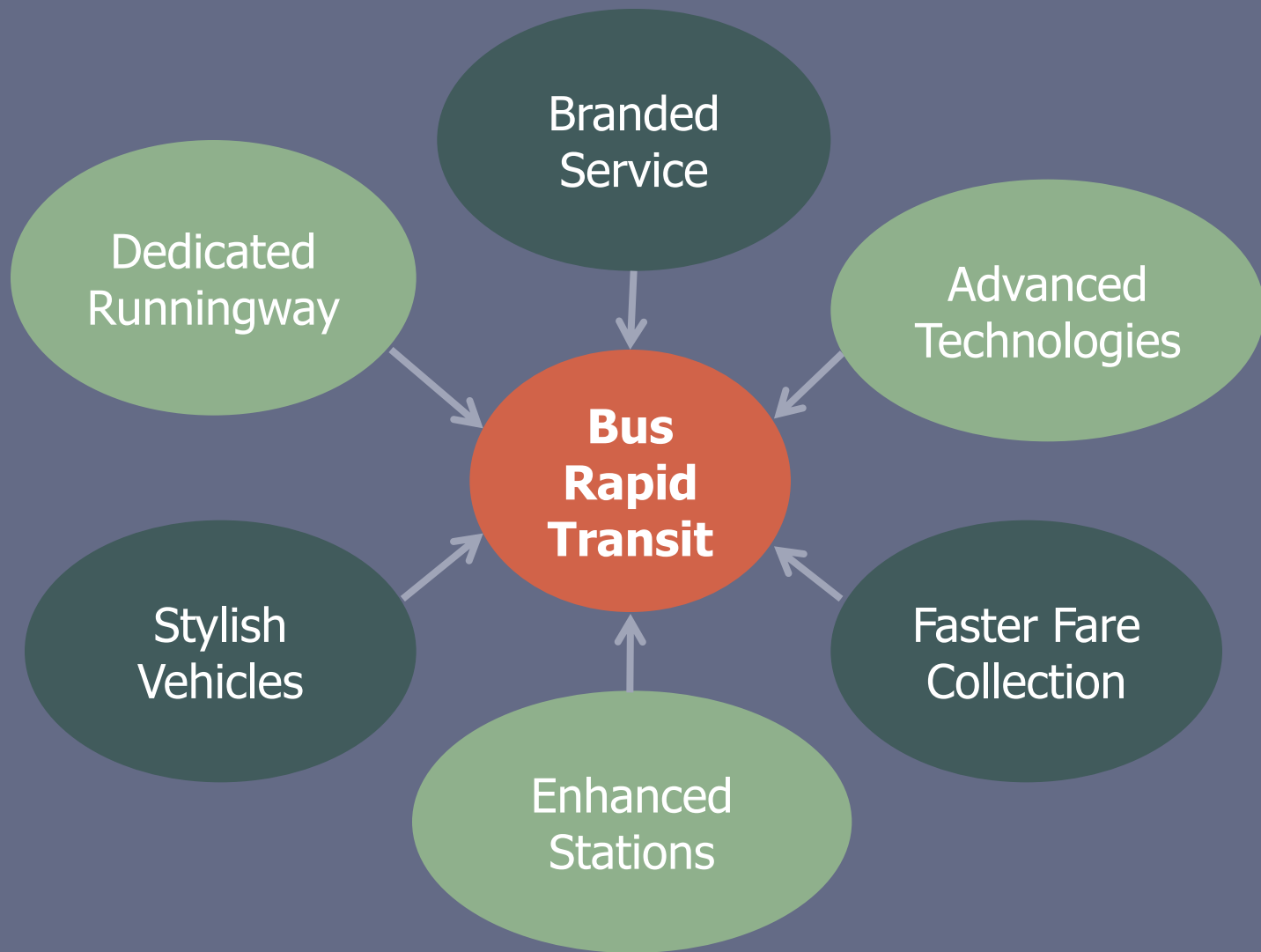
Purpose of the Countywide Transit Corridor Network

- enhance mobility and accessibility
- support economic development
- improve the environment
- provide an efficient transportation system that will facilitate Bus Rapid Transit (BRT) service

Master Plan Phasing for the Countywide Transit Corridor Network

- **Phase 1**: Recommend rights-of-way and treatments to serve land use in current area master plans
- **Phase 2**: Guidance for higher levels of treatment in conjunction with changes in land use as part of future area master plans

What is Bus Rapid Transit (BRT)?



Enhanced Stations



Level boarding areas



Off-vehicle fare collection



Real Time Transit Information



“Branded” vehicles



Eugene (OR) EmX (from LTD)



Kansas City MAX (from KCATA)



Cleveland Silver Line (from GCRTA)



Los Angeles Orange Line (from flickr.com)

Dedicated runningways



Two-lane median

One-lane median



*approximately 150 miles of corridors
from MCDOT BRT Feasibility Study,
plus additional segments
recommended by Transit Task Force*



Functional Plan Focus



- Determine where rights-of-way should be reserved for transit corridors
 - ▣ BRT-only facilities
 - ▣ Bus lanes shared by BRT and local buses

Modeling sequence for 2040 forecast year

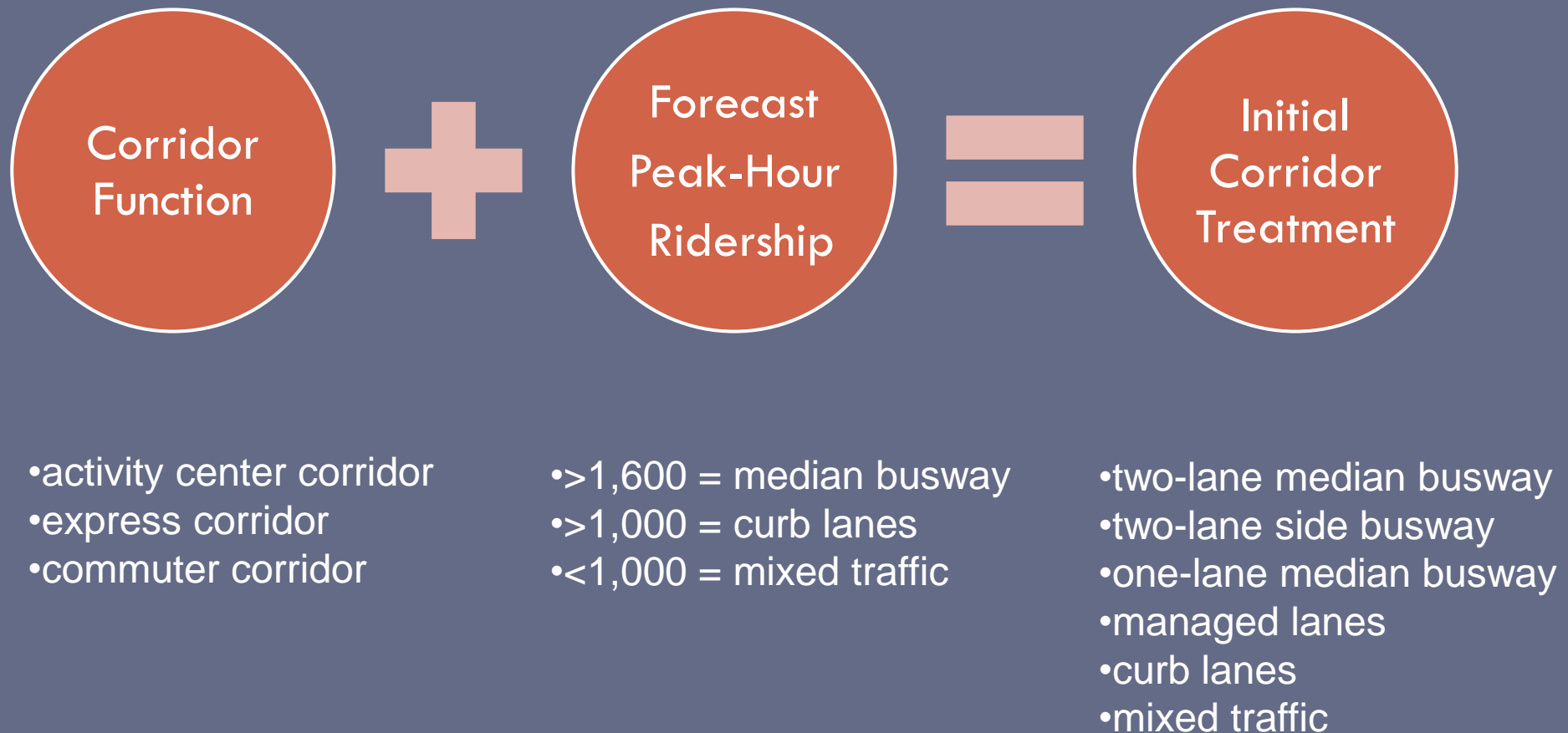
- **No-Build**: existing transportation network plus
Constrained Long Range Plan facilities,
including CCT & Purple Line
- **Build 1**: 152-mile BRT network of median busways
- **Build 2**: 152-mile BRT network with mostly median
busways and some curb lanes
- **Build 2A**: 87-mile network with a mix of treatments

Transportation Modeling

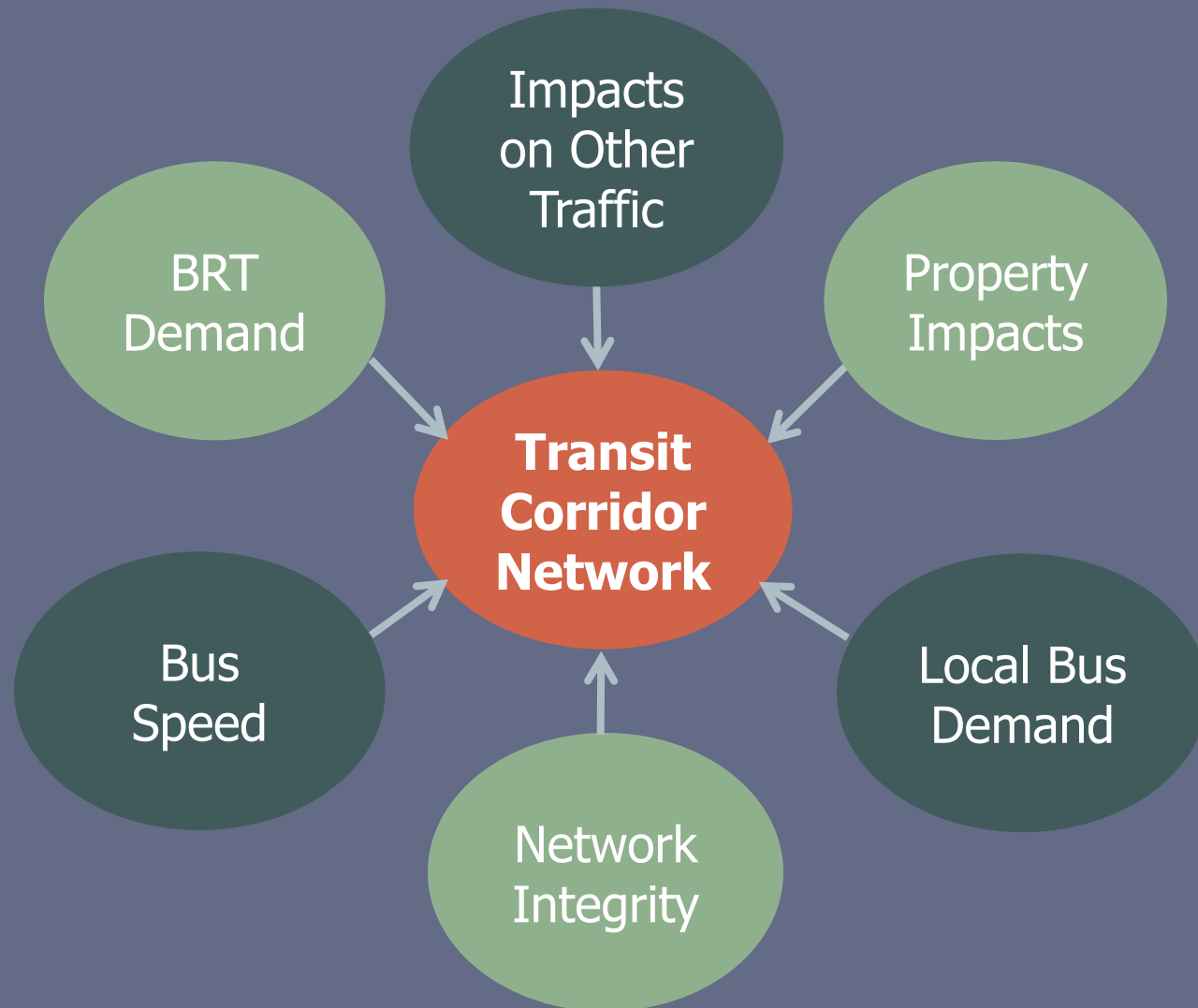
Three modeling runs in addition to no-build for the 2040 forecast year:

Treatment	Build 1	Build 2	Build 2A
Two Way Median	152	140	29
Curb Lanes		12	41
Mixed Traffic			17
Total (miles)	152	152	87

Network and Treatment Considerations



Network & Treatment Considerations



2040 Forecast Daily BRT Ridership

Corridor	Build 1	Build 2	Build 2A
MD 355 South	49k	46k	44k
MD 355 North	34k	32k	22k
Veirs Mill Rd & University Blvd	27k	27k	18k
Georgia Avenue (North & South)	24k	24k	12k
New Hampshire Avenue	22k	21k	10k
US 29	18k	16k	16k
Randolph Road	16k	16k	11k
Rockville-LSC	14k	14k	7k
Old Georgetown Road South	11k	11k	
Old Georgetown Road North	8k	8k	
Muddy Branch Road	8k	8k	
Connecticut Avenue	6k	7k	
ICC	6k	6k	
Norbeck Road	6k	5k	
North Bethesda Transitway	4k	4k	10k
University Blvd-Grosvenor	2k	2k	
Total	254k	247k	150k

5 corridors that can stand alone

- **MD 355 South** – very high ridership
- **MD 355 North** – very high ridership
- **US 29** – high ridership
- **North Bethesda Transitway** – moderate ridership
- **Georgia Ave North** – low ridership

5 less independent corridors



- ❑ **New Hampshire Ave**
- ❑ **Georgia Ave South**
- ❑ **Veirs Mill Rd**
- ❑ **Randolph Rd**
- ❑ **University Blvd**

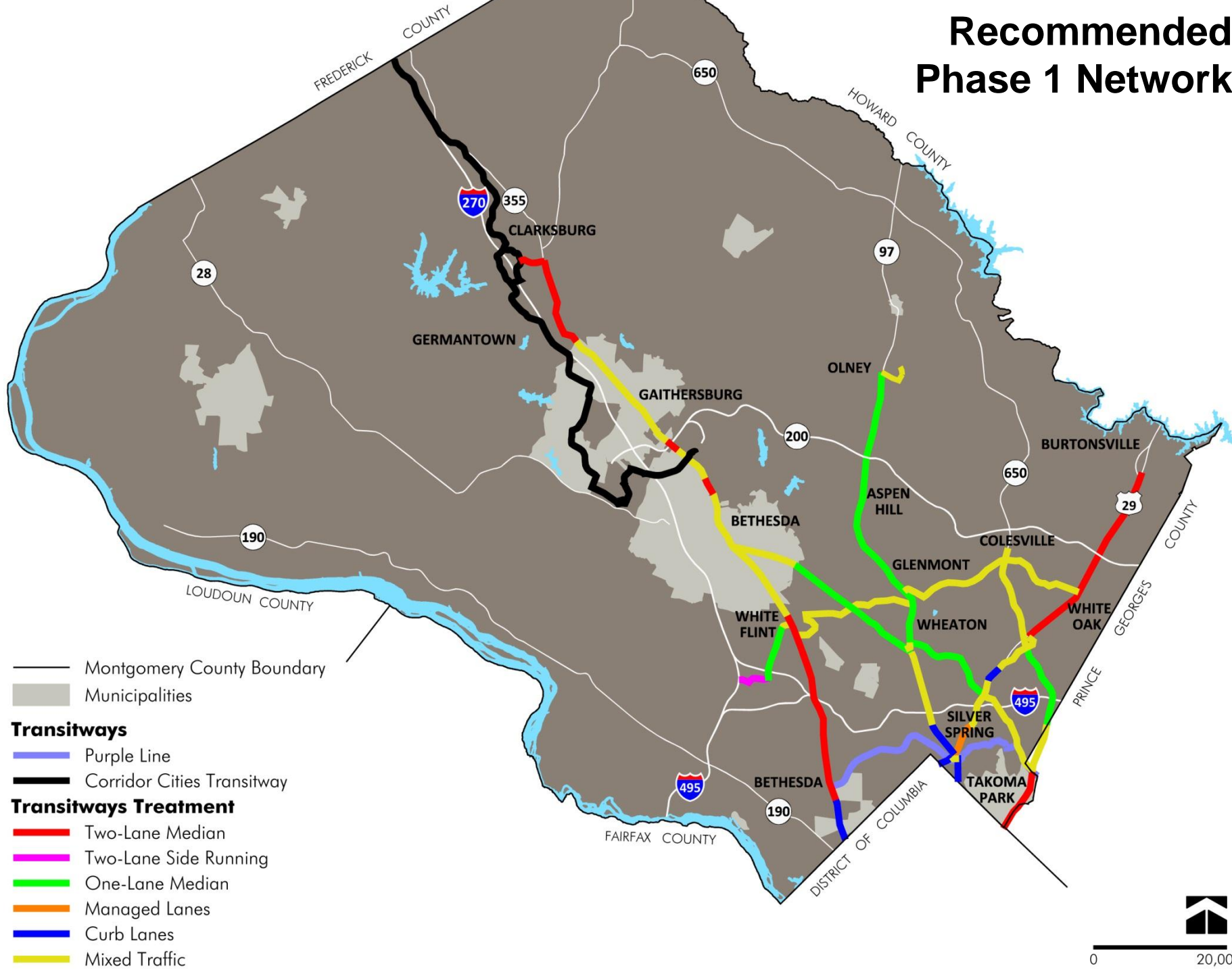
Master Plan Phasing for the Countywide Transit Corridor Network

- **Phase 1**: Recommend rights-of-way and treatments to serve land use in current area master plans
- **Phase 2**: Guidance for higher levels of treatment in conjunction with changes in land use as part of future area master plans

Recommended Phase 1 Network

Treatment	Staff Draft
Two Lane Median	19
Two Lane Side Busway	1
One Lane Median	20
Curb Lanes	4
Managed Lanes	1
Mixed Traffic	34
Total (miles)	79

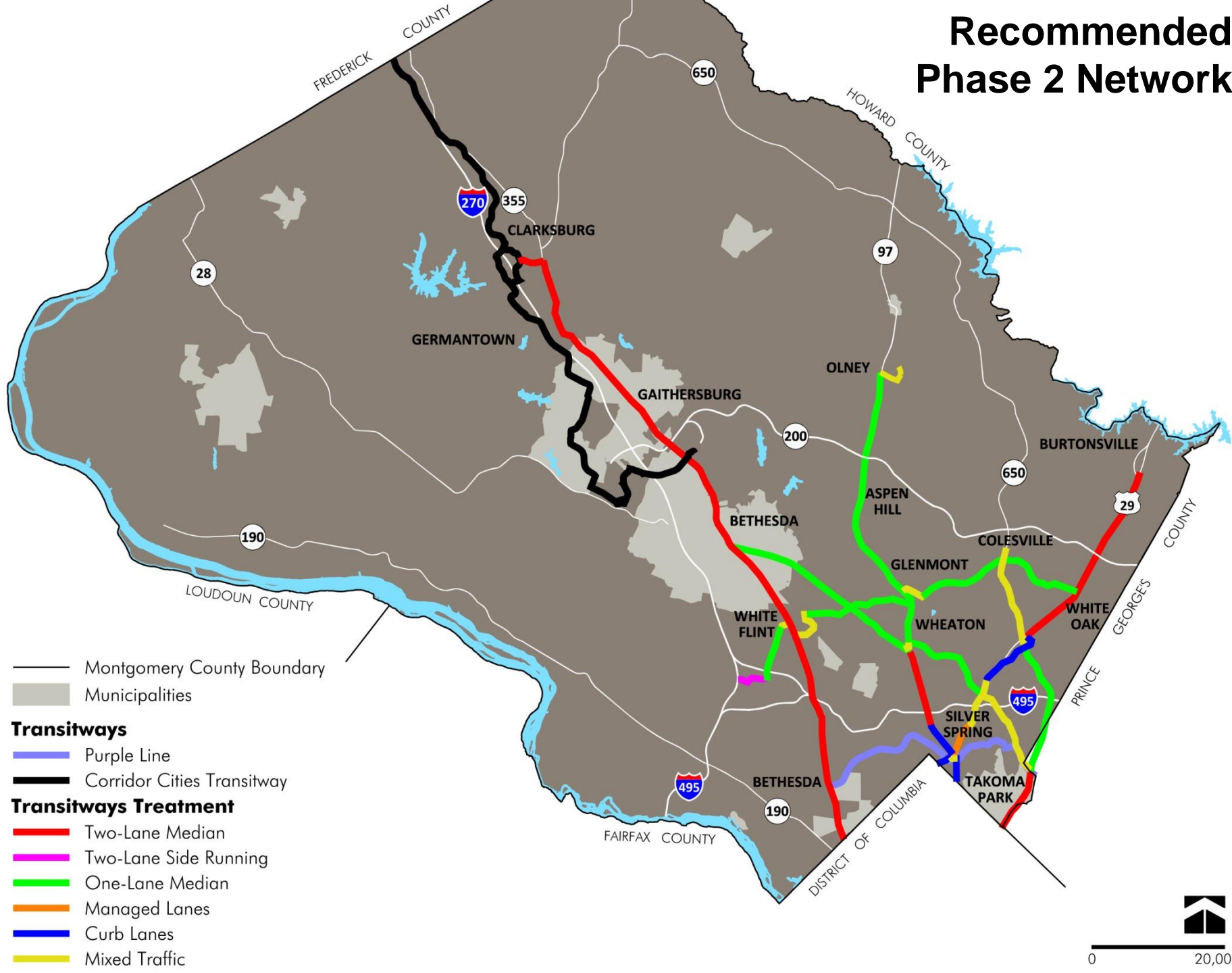
Recommended Phase 1 Network



Recommended Phase 2 Network

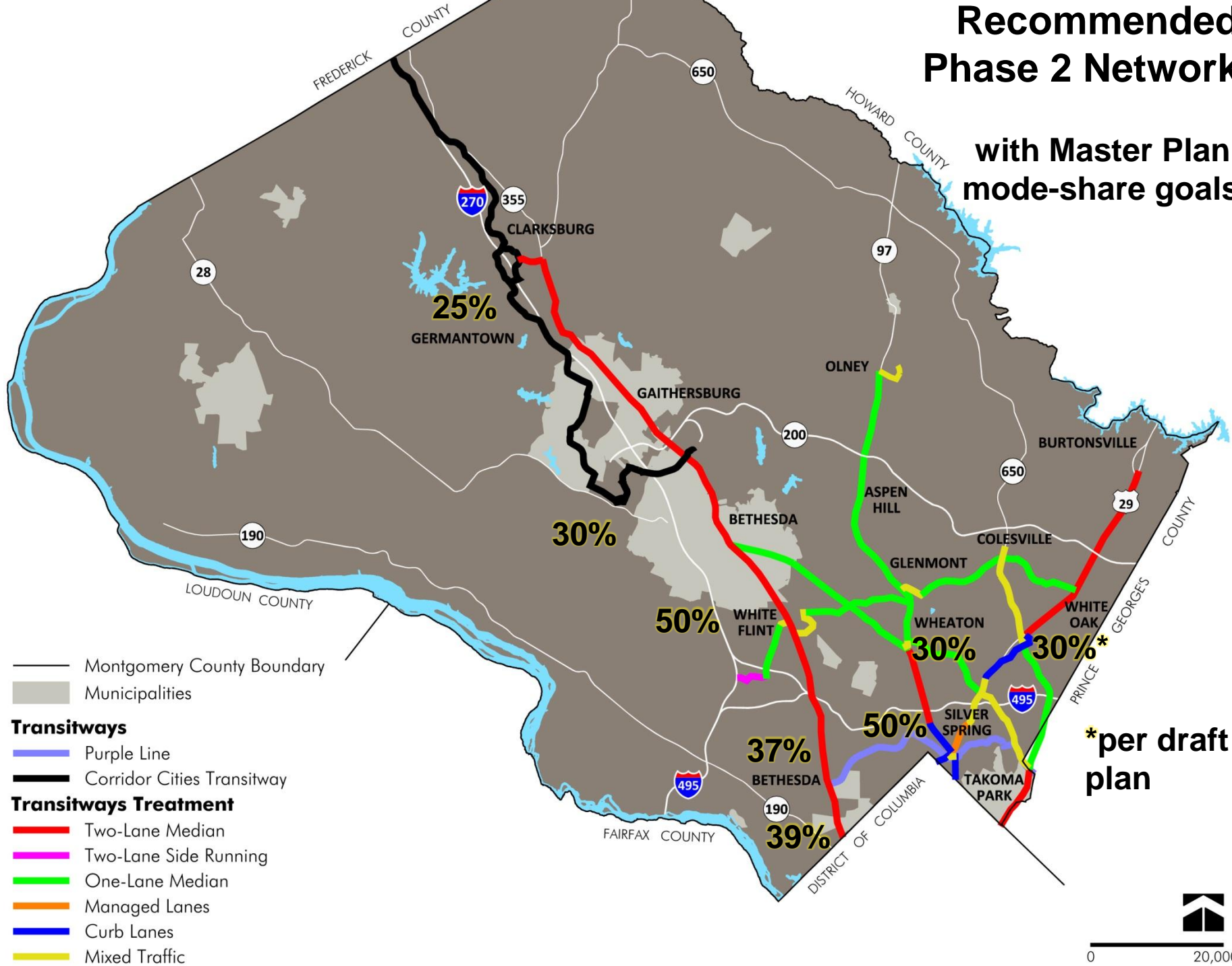
Treatment	Phase 2	Phase 1	
Two Lane Median	31	19	
Two Lane Side Busway	1	1	
One Lane Median	31	20	
Curb Lanes	5	4	
Managed Lanes	1	1	
Mixed Traffic	10	34	
Total (miles)	79	79	

Recommended Phase 2 Network



Recommended Phase 2 Network

with Master Plan
mode-share goals

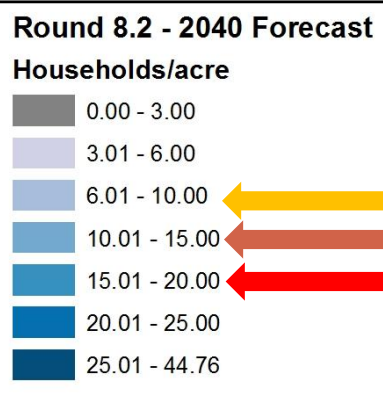


Determining Final Corridor Treatment

- Initial modeling included:
 - ▣ all median busways treated the same as Light Rail Transit (LRT) to determine maximum ridership
- Treatment thresholds were lowered to account for:
 - ▣ high-level of analysis
 - ▣ long time frame
 - ▣ model attributes that could increase ridership
- Final treatments were increased on several segments to maintain network integrity

Households

Recommended Transit Network
Compared to 2040 Forecasts

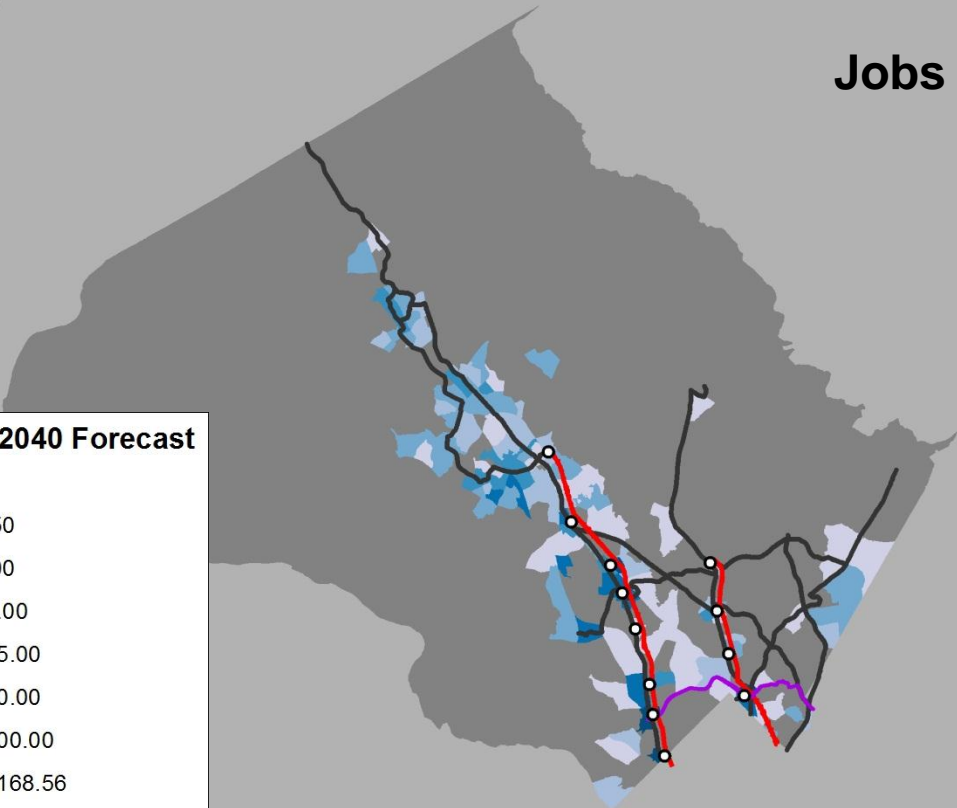
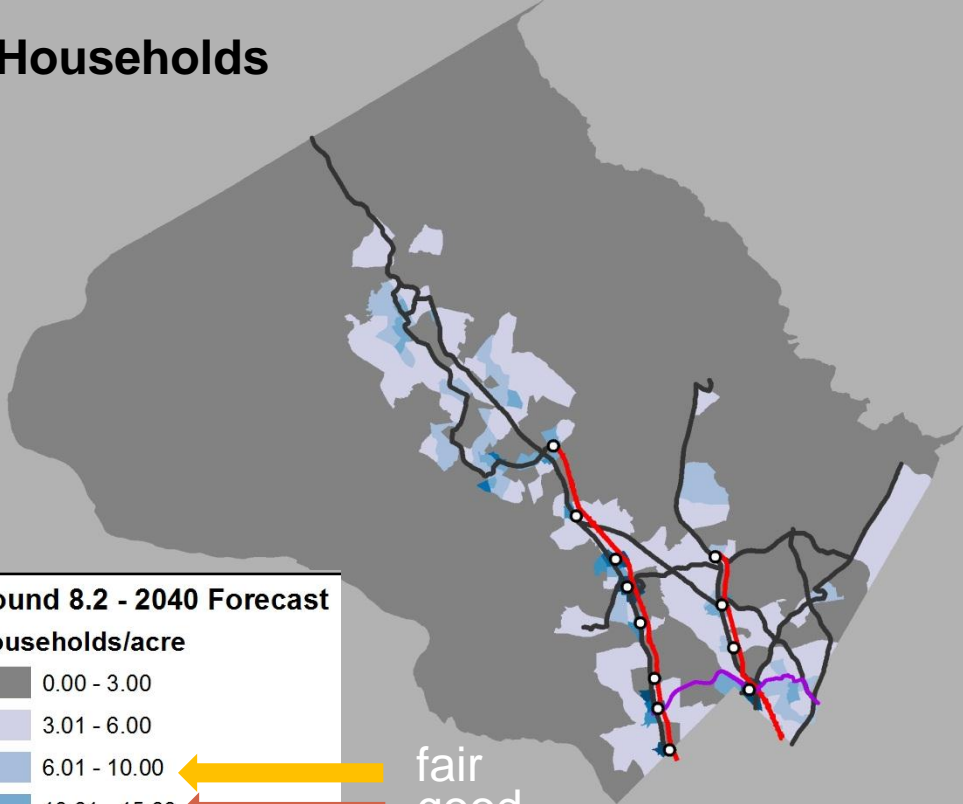


fair
good
very good

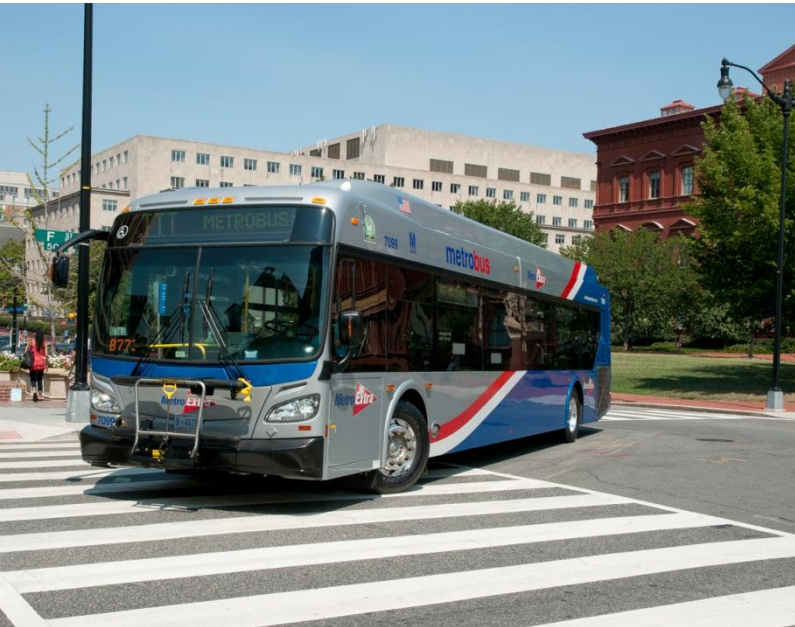
fair
good
very good



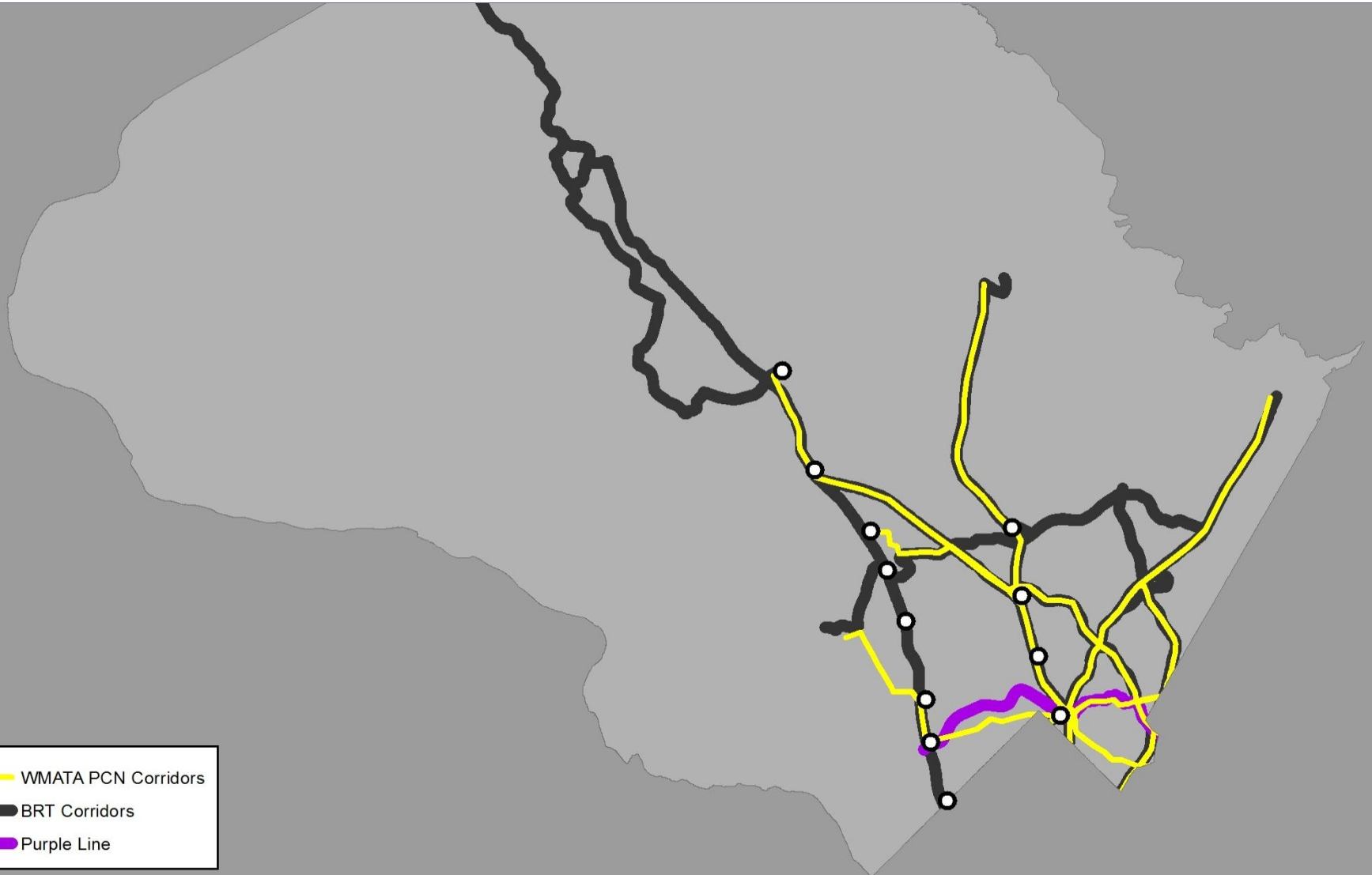
Jobs



WMATA MetroExtra Service



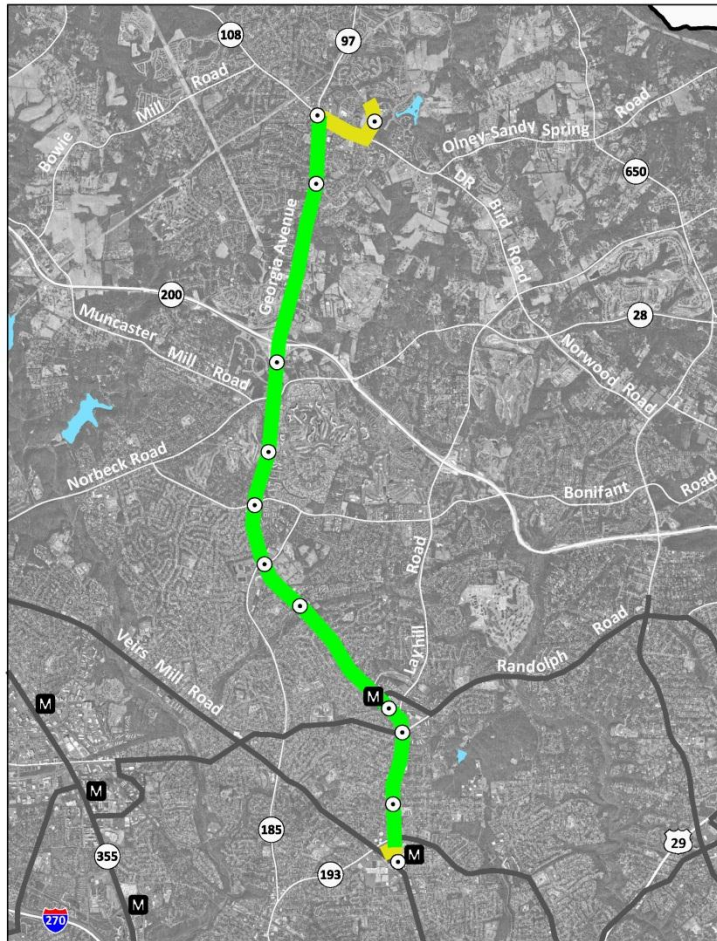
WMATA Priority Corridor Network





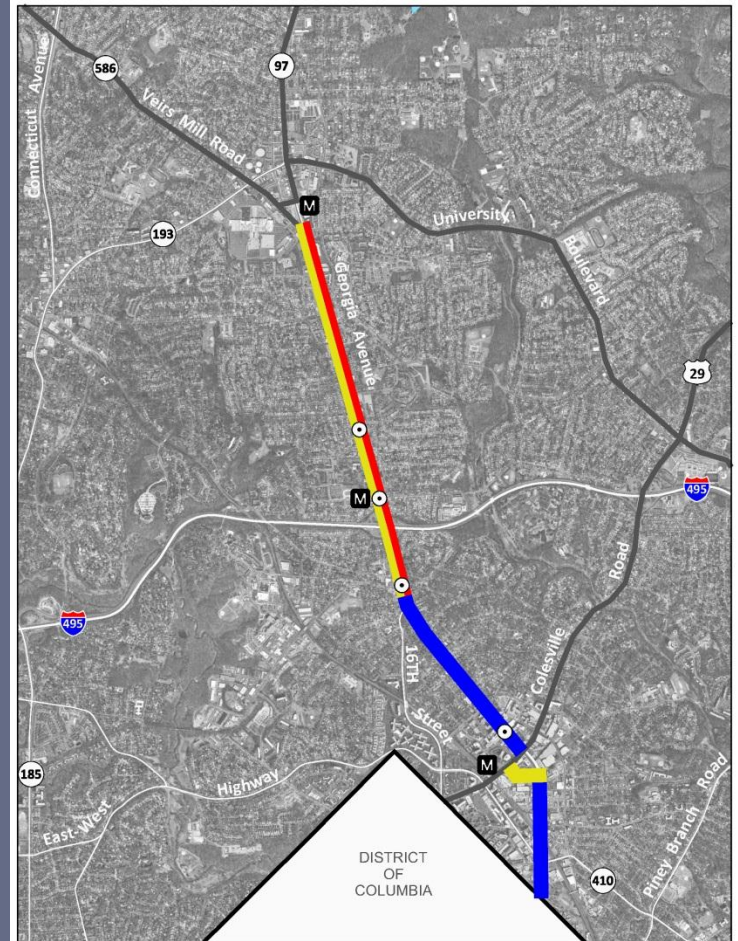
Individual Corridors

Georgia Avenue North & South



Recommended BRT Treatment

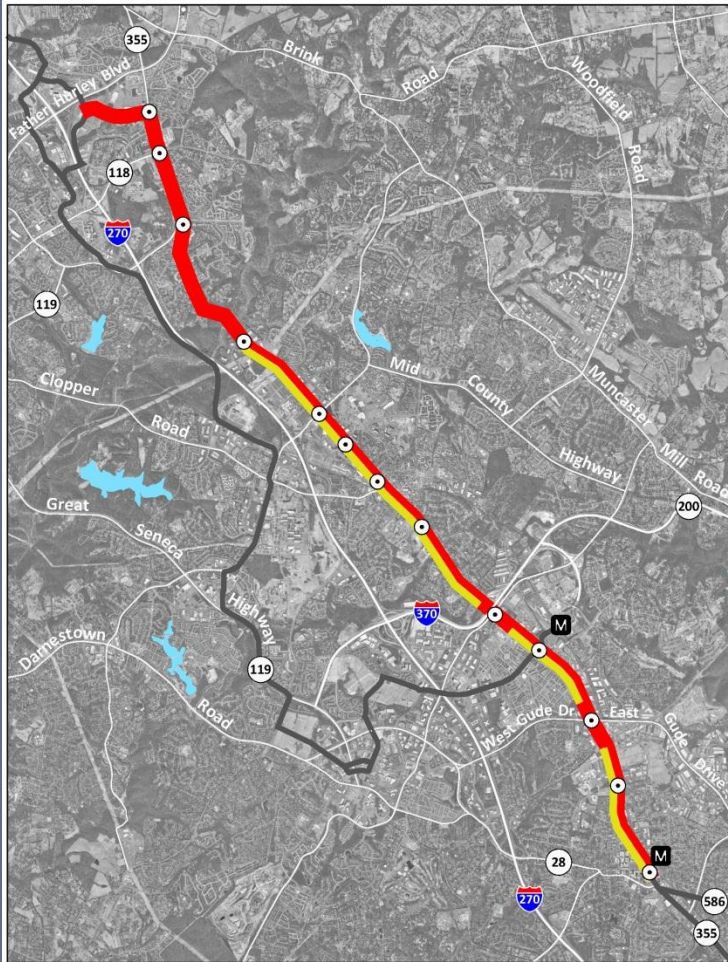
- County Line
- One-Lane Median
- Mixed Traffic
- Other BRT Corridors
- BRT Station
- Metro Station



Recommended BRT Treatment

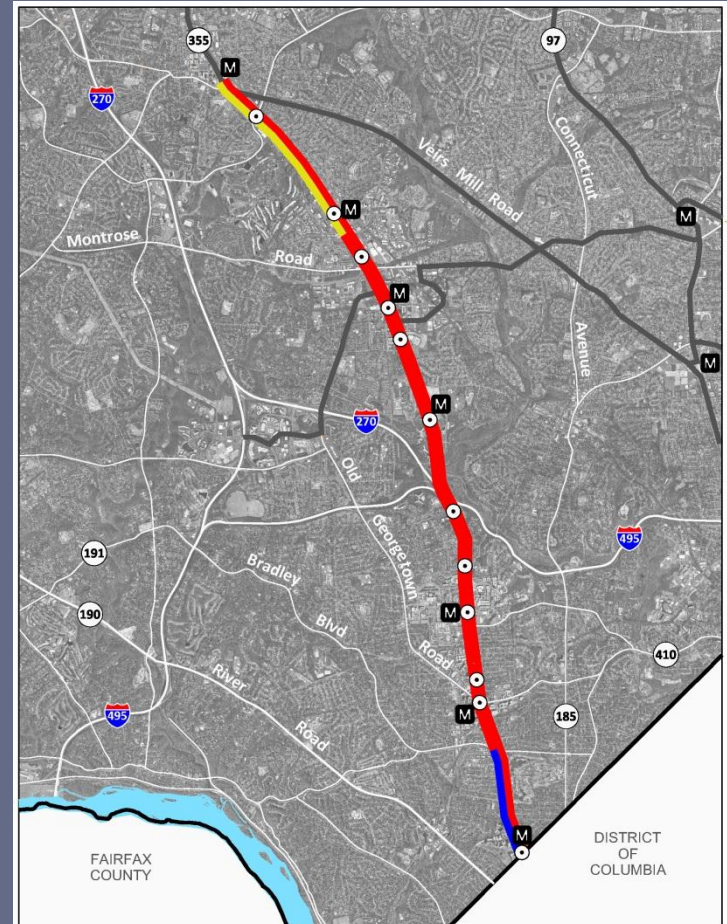
- County Line
- Curb Lanes
- Mixed Traffic
- Phase 1: Mixed Traffic
- Phase 2: Two-Lane Median
- Other BRT Corridors
- BRT Station
- Metro Station

MD355 North & South



Recommended BRT Treatment

- █ Two-Lane Median
- █ Phase 1: Mixed Traffic
Phase 2: Two-Lane Median
- █ Other BRT Corridors
- BRT Station
- M Metro Station

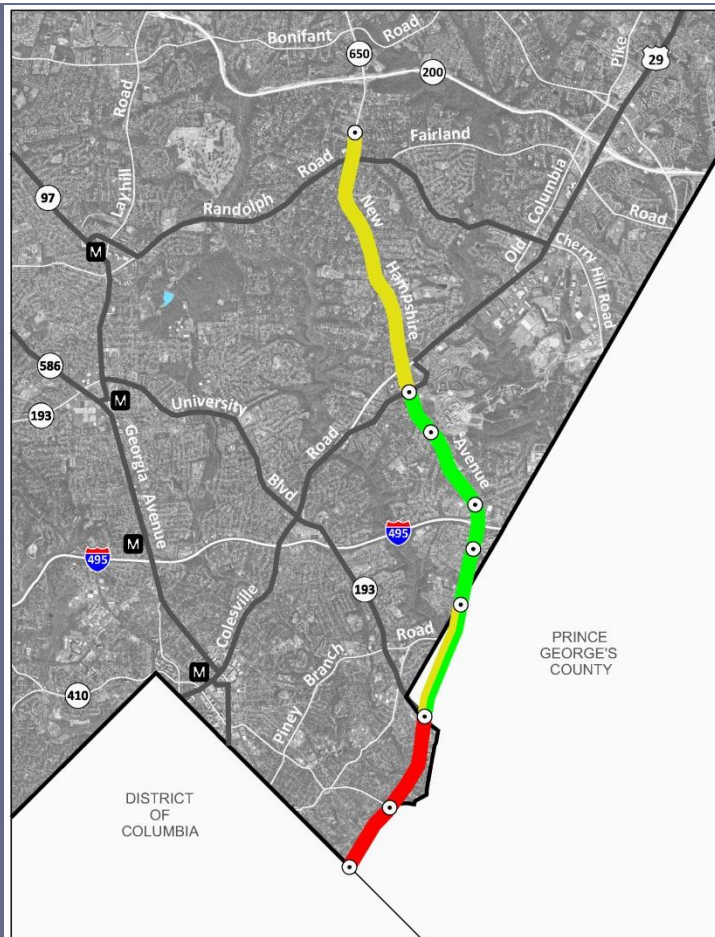


Recommended BRT Treatment

- █ Two-Lane Median
- █ Phase 1: Mixed Traffic
Phase 2: Two-Lane Median
- █ Phase 1: Curb Lanes
Phase 2: Two-Lane Median
- █ County Line
- █ Other BRT Corridors
- BRT Station
- M Metro Station

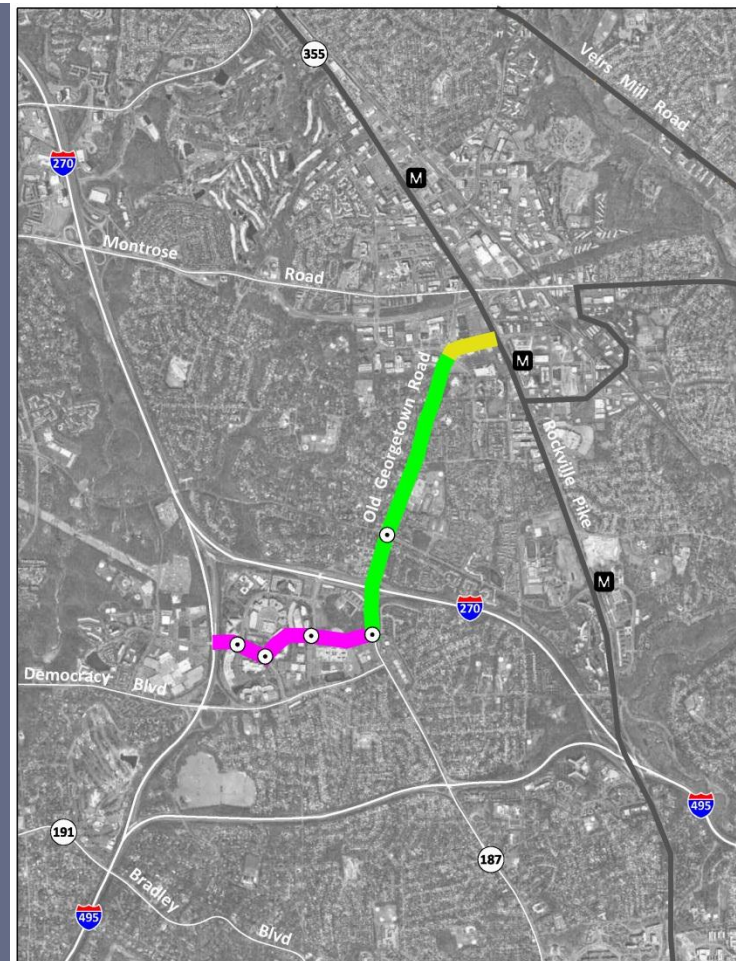


New Hampshire Avenue & North Bethesda Twy



Recommended BRT Treatment

- County Line
- Two-Lane Median
- One-Lane Median
- Mixed Traffic
- Phase 1: Mixed Traffic
- Phase 2: One-Lane Median
- Other BRT Corridors
- BRT Station
- Ⓜ Metro Station



Recommended BRT Treatment

- Two-Lane Side Running
- One-Lane Median
- Mixed Traffic
- Other BRT Corridors
- BRT Station
- Ⓜ Metro Station

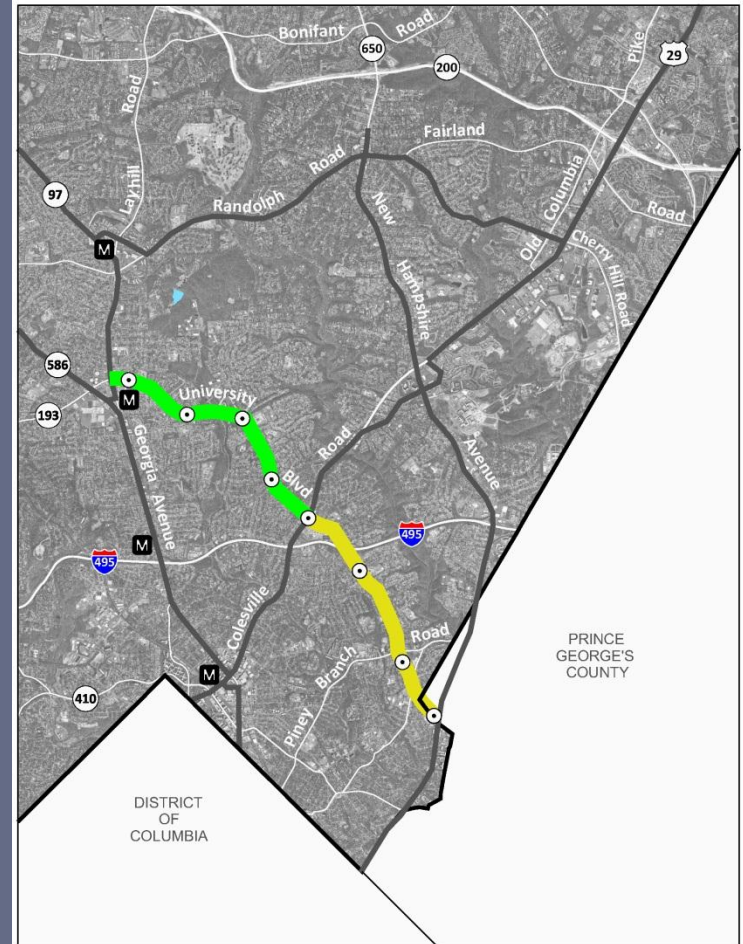


Randolph Road & University Boulevard



Recommended BRT Treatment

- County Line
- Mixed Traffic
- Phase 1: Mixed Traffic
- Phase 2: One-Lane Median
- Other BRT Corridors
- BRT Station
- Metro Station



Recommended BRT Treatment

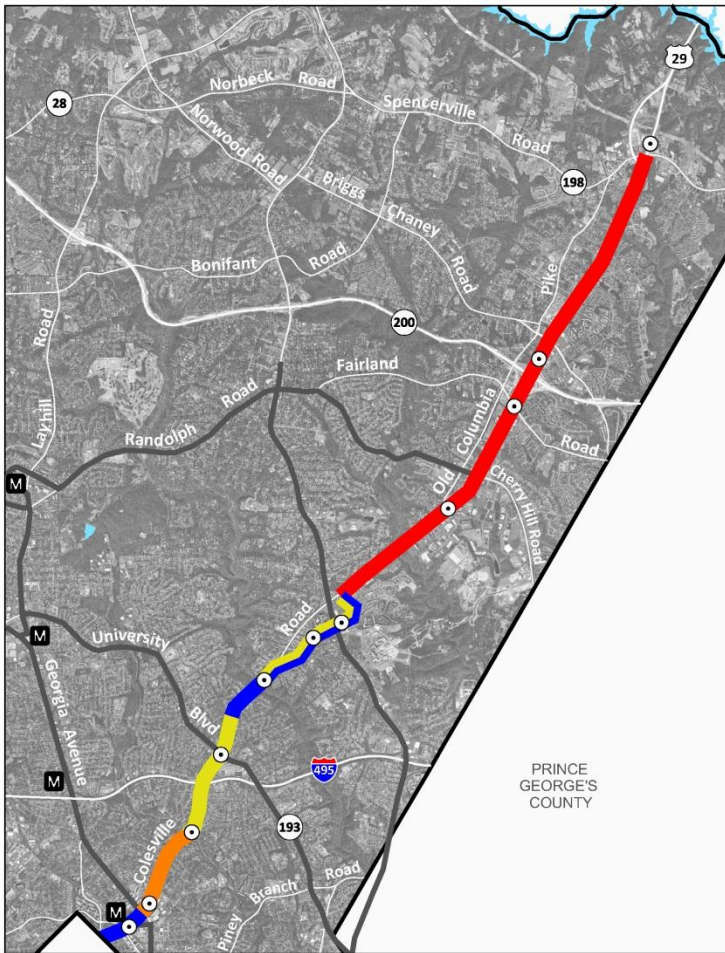
- County Line
- One-Lane Median
- Mixed Traffic
- Other BRT Corridors
- BRT Station
- Metro Station



US29

&

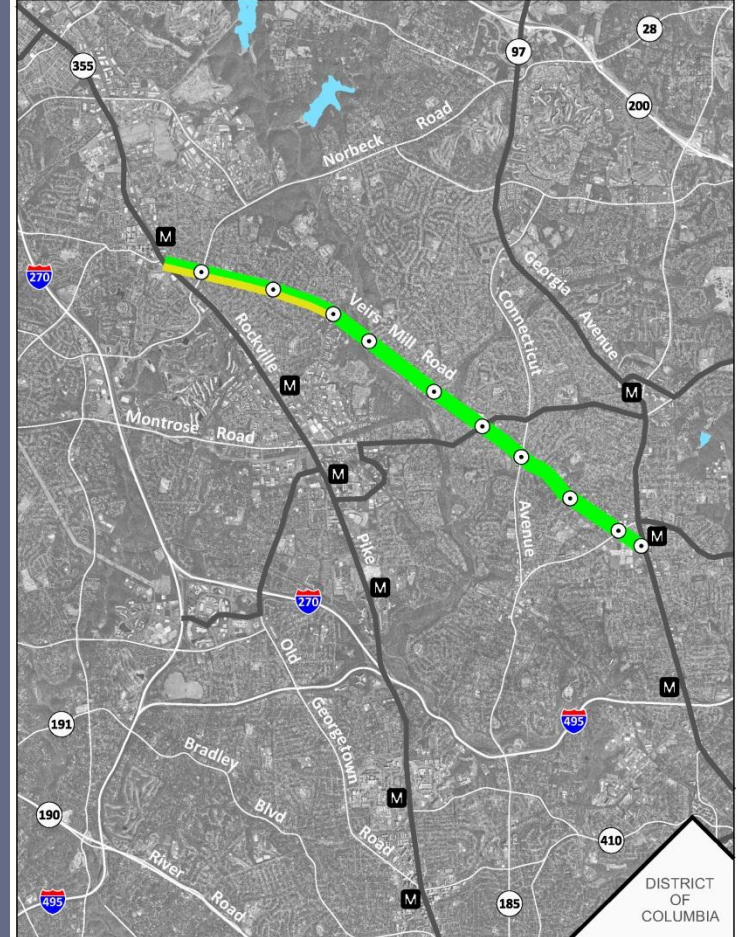
Veirs Mill Road



Recommended BRT Treatment

- County Line
- Two-Lane Median
- Managed Lanes
- Curb Lanes
- Mixed Traffic
- Phase 1: Mixed Traffic
- Phase 2: Curb Lanes
- Other BRT Corridors
- BRT Station

M Metro Station



Recommended BRT Treatment

- County Line
- One-Lane Median
- Phase 1: Mixed Traffic
- Phase 2: One-Lane Median
- Other BRT Corridors
- BRT Station
- M Metro Station



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